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(54) Synchronization signal detector, synchronization signal detecting method and demodulator.

(57) A synchronization detector includes a NRZI circuit (2) for extracting edge portions of RF signals detected as binary-valued signals to form a pulse train, a counter (6) for counting the number of channel clocks in the distance between transitions represented by the edge portions, a latch circuit (5) operated responsive to pulses from the NRZI circuit for holding a number of previously counted channel clocks immediately preceding a current count of channel clocks, and AND gates (7, 8, 9, 10, 11, 12) and an OR gate (13) for detecting synchronization signals when the combination of the channel clocks from the counter and the latch circuit is the combination of the maximum distance between transitions Tmax and Tmax-kT (k = 1 or 2) of a (d, k ; m, n ; r) modulation code. Synchronization signals may be detected promptly even if the frame structure is increased in size to enable restoration of synchronization to be expedited when frame structure synchronization is not in order. A demodulator utilizing the synchronization signal detector is also disclosed.

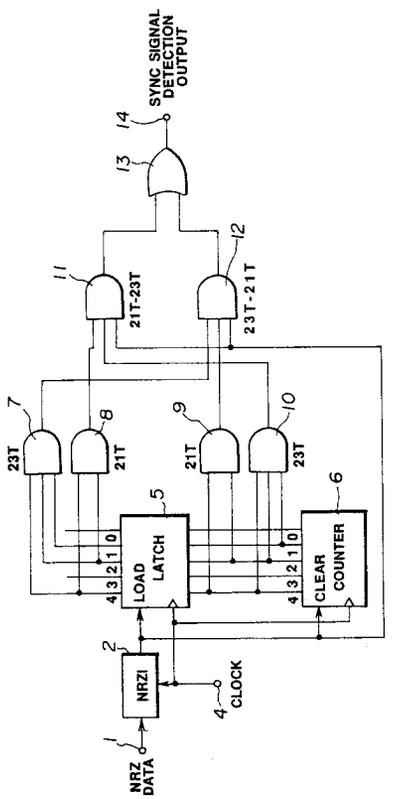

FIG.1

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EUROPEAN SEARCH REPORT

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EP 93 30 5100

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.5)
X	PATENT ABSTRACTS OF JAPAN vol. 11, no. 70 (E-485) (2517) 3 March 1987 & JP-A-61 225 920 (TOSHIBA) 7 October 1986 * abstract *	1	G11B20/10 G11B27/10 G11B27/30
Y		2,7-9	
Y	EP-A-0 455 267 (SHARP) * column 3, line 9 - column 4, line 15 * * figures 1-3 *	2,7-9	
A	US-A-5 062 011 (HASE ET AL) * abstract; figures 1,2,5 *	2,9	

TECHNICAL FIELDS SEARCHED (Int.Cl.5)

G11B
H03M
H04L

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	17 May 1994	Jonsson, P.O.

CATEGORY OF CITED DOCUMENTS

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